

What is claimed is:

1. A vehicle hydraulic brake device comprising a hydraulic pressure source for generating and outputting a predetermined hydraulic pressure, a pressure adjusting valve for adjusting the output hydraulic pressure of said hydraulic pressure source to a value corresponding to a brake operating amount, and wheel cylinders actuated by the output hydraulic pressure of said pressure adjusting valve to impart braking force to wheels of the vehicle, further comprising a hydraulic pressure supply passage connected to a hydraulic passage leading from said pressure adjusting valve to said wheel cylinders, a first proportional solenoid valve provided in said hydraulic pressure supply passage for reducing the output hydraulic pressure of said hydraulic pressure source and supplying it to said hydraulic passage leading from said pressure adjusting valve to said wheel cylinders, a second proportional solenoid valve disposed between said hydraulic pressure supply passage and said pressure adjusting valve for reducing the hydraulic pressure supplied from said hydraulic pressure supply passage, a check valve provided parallel to said second proportional valve and allowing fluid flow from said pressure adjusting valve

toward said hydraulic pressure supply passage, and a control means for controlling operations of said first and second proportional solenoid valves, wherein control of the hydraulic pressure supplied to said wheel cylinders during automatic brake control is performed by said first proportional solenoid valve and said second proportional solenoid valve.

2. A vehicle hydraulic brake device comprising a hydraulic pressure source for generating and outputting a predetermined hydraulic pressure, a pressure adjusting valve for adjusting the output hydraulic pressure of said hydraulic pressure source to a value corresponding to a brake operating amount, a pressure chamber connected to said pressure adjusting valve, a master cylinder including a master piston actuated by the output hydraulic pressure of said pressure adjusting valve introduced into said pressure chamber or the output hydraulic pressure of said pressure adjusting valve introduced into said pressure chamber and the brake operating force for generating brake hydraulic pressure, and wheel cylinders actuated by the output hydraulic pressure of said master cylinder to impart braking force to wheels of the vehicle, further comprising a solenoid valve for supplying the output hydraulic pressure of said

pressure adjusting valve to a hydraulic system leading from said master cylinder to said wheel cylinder, a hydraulic pressure supply passage connected to a hydraulic passage connecting said pressure adjusting valve to said solenoid valve, a first proportional solenoid valve provided in said hydraulic pressure supply passage for reducing the output hydraulic pressure of said hydraulic pressure source and supplying it to said hydraulic passage connecting said pressure adjusting valve to said solenoid valve, a second proportional solenoid valve disposed between said hydraulic pressure supply passage and said pressure adjusting valve for reducing the hydraulic pressure supplied from said hydraulic pressure supply passage, a check valve provided parallel to said second proportional valve and allowing fluid flow from said pressure adjusting valve toward said hydraulic pressure supply passage, and a control means for controlling operations of said solenoid valve and said first and second proportional solenoid valves, wherein control of the hydraulic pressure supplied to said wheel cylinders during automatic brake control is performed by said solenoid valve and said first proportional solenoid valve and said second proportional solenoid valve.

3. A vehicle hydraulic brake device comprising a hydraulic pressure source for generating and outputting a predetermined hydraulic pressure, a pressure adjusting valve for adjusting the output hydraulic pressure of said hydraulic pressure source to a value corresponding to a brake operating amount, a pressure chamber connected to said pressure adjusting valve, a master cylinder including a master piston actuated by the output hydraulic pressure of said pressure adjusting valve introduced into said pressure chamber or the output hydraulic pressure of said pressure adjusting valve introduced into said pressure chamber and the brake operating force for generating brake hydraulic pressure, and wheel cylinders actuated by the output hydraulic pressure of said master cylinder to impart braking force to wheels of the vehicle, further comprising a hydraulic pressure supply passage connected to a hydraulic passage connecting said pressure adjusting valve to said pressure chamber, a first proportional solenoid valve provided in said hydraulic pressure supply passage for reducing the output hydraulic pressure of said hydraulic pressure source and supplying it to said hydraulic passage connecting said pressure adjusting valve to said pressure chamber, a second proportional solenoid valve disposed between said

hydraulic pressure supply passage and said pressure adjusting valve for reducing the hydraulic pressure supplied from said hydraulic pressure supply passage, a check valve provided parallel to said second proportional valve and allowing fluid flow from said pressure adjusting valve toward said hydraulic pressure supply passage, and a control means for controlling operations of said first and second proportional solenoid valves, wherein control of the hydraulic pressure supplied to said wheel cylinders during automatic brake control is performed by said first proportional solenoid valve and said second proportional solenoid valve.

4. A vehicle hydraulic brake device as claimed in claim 1, further comprising means for detecting that the output hydraulic pressure of said pressure adjusting valve has become equal to the hydraulic pressure of said hydraulic pressure supply passage, and wherein when it is detected by said means that the output hydraulic pressure of said pressure adjusting valve has become equal to the hydraulic pressure of said hydraulic pressure supply passage, automatic brake control is stopped.

5. A vehicle hydraulic brake device as claimed in

claim 2, further comprising means for detecting that the output hydraulic pressure of said pressure adjusting valve has become equal to the hydraulic pressure of said hydraulic pressure supply passage, and wherein when it is detected by said means that the output hydraulic pressure of said pressure adjusting valve has become equal to the hydraulic pressure of said hydraulic pressure supply passage, automatic brake control is stopped.

6. A vehicle hydraulic brake device as claimed in claim 3, further comprising means for detecting that the output hydraulic pressure of said pressure adjusting valve has become equal to the hydraulic pressure of said hydraulic pressure supply passage, and wherein when it is detected by said means that the output hydraulic pressure of said pressure adjusting valve has become equal to the hydraulic pressure of said hydraulic pressure supply passage, automatic brake control is stopped.

7. A vehicle hydraulic brake device as claimed in claim 1, further comprising wheel cylinder pressure detecting means for detecting the hydraulic pressure of said wheel cylinders, and wherein when it is detected that the hydraulic pressure of said wheel

cylinders is higher than the hydraulic pressure controlled by said first proportional solenoid valve and said second proportional solenoid valve, automatic brake control is stopped.

8. A vehicle hydraulic brake device as claimed in claim 2, further comprising wheel cylinder pressure detecting means for detecting the hydraulic pressure of said wheel cylinders, and wherein when it is detected that the hydraulic pressure of said wheel cylinders is higher than the hydraulic pressure controlled by said first proportional solenoid valve and said second proportional solenoid valve, automatic brake control is stopped.

9. A vehicle hydraulic brake device as claimed in claim 3, further comprising wheel cylinder pressure detecting means for detecting the hydraulic pressure of said wheel cylinders, and wherein when it is detected that the hydraulic pressure of said wheel cylinders is higher than the hydraulic pressure controlled by said first proportional solenoid valve and said second proportional solenoid valve, automatic brake control is stopped.